UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,055	04/24/2001	David Glenn DeGroote	1002-2U	3715

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ART UNIT	PAPER NUMBER
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DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the communication filed on 03/15/2005.

New ground of rejection presents in this Office Action. Accordingly, this Action is non-final.

Claims 1-25 are pending in the application.

Response to Amendment

2.   Applicants' amendments with respect to claims 1-25, in the Remarks section, filed on 03/15/2005,

have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the invention.

<u>As per Claims 1-25</u>:

Claims 1-12 and Claims 13-25 recite indefinite limitation: "live component".

For example, in the claim 1 (and similar manner in Claim 13), the claimed phrase:

"(b) "a <u>live component</u> editor for allowing a user to edit said <u>live component</u> utilize resources from

said resource library"

(d) a viewer generator for creating a <u>live component</u> viewer from said pre-built application

modules directed by said <u>live component</u> editor;

(e) a component description generator for creating a <u>live component</u> description file directed by

said <u>live component</u> editor":

The term "live" of "live component" is indefinite. The term "live component" in the Claims (Claims

1-25) acts like a label to the terms "editor", "view". There is no further limitation to functionalize the word

"live". Through the specification, "live component" is used repeatedly, but nowhere in the specification it

defines or functionalize this term clearly. In the paragraph [0010], the specification mentions the purpose

of "live component", but it does not particularly point out what "live" in the "live component" is. Fail to

discuss or to define this term clearly in the specification and use it in Claims 1-25 will cause the claims

ambiguous. A Claim, which is ambiguous, will cause the Claim indefinite. Thus Claims 1-25 are

indefinite.

Applicants are respectfully requested to point out particularly the definition of "live component"

and its teaching of this term in the specification, or including further limitations to distinct this "live

component from a generic component. The Examiner interprets "live component" in the Claim as a

"generic component"; within with the Claims, this component is a computation that solve math expression.

<u>As per Claims 7, 9, 20, 22</u>:

Claims 7, 9, 20, and 22, are claiming a computer readable medium and method recite

instructions include "XML". However, instructions in "XML" are developed, extensible, by W3C. This

markup language and its tag instructions have been developed and updated with many different versions.

Recitation, **instructions** include "XML", tends to cover the future development of a language, i.e. claiming

something that has not been existed. Such claiming is indefinite. Thus Claims 7, 9, 20, and 22 are

indefinite.

<u>As per claims 9, 10, 11, 22, 23, and 24</u>:

Claims 9, 10, 11, 22, 23, and 24 recite the limitation "MathXL" which is a trademark, a product of

W3C. A trademark or trade name is used in a claim as a limitation to identify or describe a particular

material or product render the claim indefinite. Such claim does not comply with the requirements of 35

U.S.C. 112, second paragraph.

See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the

trademark or trade name cannot be used properly to identify any particular material or product. A

trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a

trademark or trade name does not identify or describe the goods associated with the trademark or trade

name.

In the present case, the trademark/trade name is used to identify/describe the product and the

product's elements such as "MathXL". Accordingly, Claims 9, 10, 11, 22, 23, and 24, which include the

trademark, are indefinite.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
patent in the United States.

5.   Claim 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang, "Design and

Protocol for Internet Accessible Mathematical Computation", 1999.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per Claim 1: Wang discloses,

A computer readable medium encoded with a computer program for generating a live component

comprising:

(a) a resource library (See elements such as MathML, OpenMath, Java Package used in the reference:

E.G. page 292 right column, the fourth bullet, MCP library);

(b) a live component editor for allowing a user to edit said live component utilizing resources from said resource library (In page 293, see Figure 3, Editor/Parser and second bullet in the left column. See Figure 5: *'live component'* (Math Expr →Compute engine. E.G. page 292 right column, text in section 4, "an Icl may offer interactive display of mathematical curves and surfaces" → *live*);

(c) a library of pre-built application modules (Refer to File System; Java package);

(d) a viewer generator for creating a live component viewer from said pre-built application modules directed by said live component editor' (UI Control, Editor/Parser, Exp Store which embedded in File system), *and*

(e) a component description generator for creating a live component description file directed by said live component editor (Section 4.1 - Command Templates, (page 293), and combination of section 6.4 – Help and Command Template, section 7.1 MathML (page 296)).

As per Claim 2: Wang discloses, *The apparatus according to claim 1, wherein said live component editor is a live component editor and simulator capable of simulating said live component* (See Editor/Parser in Figure 3 and See Figure 4. With figure 4, a user can simulate live math with respect to a given command template for solving or plotting an equation).

As per Claim 3: Wang discloses, *The apparatus according to claim 1, wherein said live component is downloaded from a server to a local system, wherein algorithms in said live component are executed on said local system* (See Compute Engine: the Server can be local within a File System formed by independent computation agents – see Figure 5, and all text related to Compute Engine).

As per Claim 4: Wang discloses, *The apparatus according to claim 1, wherein said pre-built application modules include computer executable instructions selected from the group consisting of:*

(a) compiled code;

(b) assembled code; and

(c) interpreted script.

Recited elements are non-functional descriptive materials. See File System (very common in the art - known file system in Microsoft Windows operating system): Any file in file system, (particularly, pre-built

files such as filed in a library of a computer) can be selected by a user via file control. Therefore theses

files *(a) compiled code; (b) assembled code; and (c) interpreted script,* if existed would be selectable.

As per Claim 5: Wang discloses, *The apparatus according to claim 1, wherein said live component viewer*

includes computer executable instructions selected from the group consisting of:

(a) compiled code;

(b) assembled code; and

(c) interpreted script.

Recited elements are non-functional descriptive materials. See File System, particularly see page 293,

left column and see Figure 3. An {editor, file system, manager} is provided can be utilized to selected

theses files *(a) compiled code; (b) assembled code; and (c) interpreted script,* if existed.

As per Claim 6: Wang discloses, *The apparatus according to claim 1, wherein said live component*

description file includes live component viewer instructions. (Refer to rationale address to live component:

includes Live component viewer instructions → refer to code of command template and MathML that

causes math expression and its computation can be viewed on the Web browser).

As per Claim 7: Wang discloses, *The apparatus according to claim 6, wherein said live component viewer*

instructions include XML. (Page 296: See section 7.1, MathML).

As per Claim 8: Wang discloses, *The apparatus according to claim 6, wherein said live component viewer*

instructions includes data links (This is part of HTML code: also refer to page 296: section 7.1, MathML).

As per Claim 9: Wang discloses, *The apparatus according to claim 7, wherein said XML is MathML.*

(Page 296: See section 7.1, MathML).

As per Claim 10: Wang discloses, *The apparatus according to claim 9, wherein said MathML- includes*

live MathML extensions. (See tags used XML and MathML; XML/MathML versions are extendable).

As per Claim 11: Wang discloses, *The apparatus according to claim 10, wherein said live MathML*

extensions comprises at least one extension selected from the group of:

(a) a bi-directional equals operator',

(b) an edit attribute indicating if a value is editable; and

(c) a display attribute indicating a name and format for a display.

Recited elements are non-functional descriptive materials. The Claim is a mere data structure of a math

expression. See page 292: Compute Engine: "wide range of technical scientific computations.

As per Claim 12: Wang discloses, *The apparatus according to claim 1, wherein said resource library*

includes at least one of the set of:

(a) rules;

(b) definitions;

(c) default values; and

(d) resources.

Recited elements are non-functional descriptive materials. Refer to GUI and Editors associated with

MathML, XML, and Java package (the library components) of this reference.

As per Claim 13: Wang discloses an editor which is capable of generating computing math components.

The teaching covers the limitations,

A method for generating a live component comprising the steps of:

(a) opening an initial Live component with a Live component editor' (See Figure 3, Editor/Parser),

Regarding, *"(b) iteratively updating said live component by;*

(i) selecting an operand for modification"

(ii) selecting a step from the group of steps consisting of:

(1) modifying the properties of said selected operand; and

(2) inserting an additional operation, selected from a Library of pre-built application modules, that

operates on said operand using predetermined rules that correspond to said additional operation":

With a presence of **a user** and the Editor shown in Figure 3 and the texts in page 293, the user could

manually use the editor to select a component based on the bullets shown in the left column. Use the

editor, **the user** could program/encode the component in the manner of the claimed limitation. Also see

page 292, Figure 2: {GUI, File}, See Mathematical Data Encoding, fifth bullet in the right column.

(Examiner note: It should be noted that a user could manually do the Claimed limitation shown).

Regarding: "(c) saving the modified live component by:

(i) creating a live component viewer using said pre-built application modules directed by said rules based editor; and

(ii) creating a live component description file directed by said rules based editor":

Using UI Control, Editor/Parser, Exp Store, and library supports which embedded in File system and the using the features described in the bullets of page 293 and the teaching in section 6.4, Help and Command Template and section 7.1 MathML(page 296), the user *could create and* save command templates, HTML form, MathML forms, MP Formats.

As per Claim 14: Wang discloses, *The method according to claim 13, wherein said live component editor is a live component editor and simulator.*

(Editor of Figure 3 and Command template of Figure 4 provides a user simulation the live math with respect to a given command template).

As per Claim 15: Wang discloses, *The method according to claim 13, wherein said initial live component is a default live component* (*default* is feature of viewing/programming, where if an initial value required to be set).

As per Claim 16: Wang discloses, *The method according to claim 13, further including the step of downloading said live component from a server to a local system, wherein algorithms in said live component are executed on said local system.* (See Figure 2: Local and remote Host: Examiner note: *downloading said live component from a server to a local system*: commonly used in Client/server).

As per Claims 17-25: Claims have the functionality corresponding to Claims 4-12, respectively. See rationale addressed in Claims 4-12 above.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

        Le et al., Client-Server Communication Standards for Mathematical Computation", ACM, pages: 299-305, 1999.

Wright, "Interactive Mathematics via The Web using MathM", ACM Press, pages: 49-57, 6-2000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3694. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted T. Vo
Patent Examiner
Art Unit 2192
June 10, 2005